Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A Mg-based ferrite material consisting essentially of MgO and Fe_2O_3 components or of CaO, MgO and Fe_2O_3 components, and having a composition of formula (1):

$Ca_aMg_bFe_cO_d$ (1),

wherein a, b, and c satisfy

$0.10 \leq b/(b+c/2) \leq 0.85$ and

$0 \leq R(Ca) \leq 0.10$,

wherein R(Ca) is expressed as

$R(Ca) = a \times Fw(CaO) / (a \times Fw(CaO) + b \times Fw(MgO) + (c/2) \times Fw(Fe_2O_3))$

(Fw(A): formula weight of A); and

d is determined by oxidation numbers of Ca, Mg and Fe;

wherein said Mg-based ferrite material has a saturation magnetization measured at 14 kOe using an vibrating sample magnetometer, in the range of 30-80 emu/g,

wherein said Mg-based ferrite material has a dielectric breakdown voltage in the range of 1.0-5.0 kV.

2. (Original) A Mg-based ferrite material as claimed in claim 1, wherein b and c satisfy $0.30 \leq b/(b+c/2) \leq 0.70$.

3. (Previously Presented) A Mg-based ferrite material as claimed in claim 1,

wherein said Mg-based ferrite material has an average particle diameter in the range of 0.01-150 μm.

4. (Original) An electrophotographic development carrier, which comprises a Mg-based ferrite material according to any of claims 1-3.

5. (Original) An electrophotographic development carrier, which comprises a Mg-based ferrite material according to any of claims 1-3,

wherein said Mg-based ferrite material is coated with resin.

6. (Previously Presented) An electrophotographic developer, which comprises an electrophotographic development carrier according to claim 4, and a toner.

7. (Original) An electrophotographic developer as claimed in claim 6,

wherein the ratio of the toner to the carrier by weight is in the range of 2-40 wt%.

8. (Currently Amended) A process for producing a Mg-based ferrite carrier according to claim 1, which comprises:

i) mixing raw materials appropriately selected from the group consisting of MgO, $MgCO_3$, $Mg(OH)_2$ and $MgCl_2$ as Mg raw materials; FeO, Fe_2O_3, Fe_3O_4 and $Fe(OH)_x$ as Fe raw materials (x representing a number in the range from 2 to 3); and CaO, $CaCO_3$, $Ca(OH)_2$ and $CaCl_2$ as Ca raw materials, provided that at least one Mg-containing compound and at least one Fe-containing compound are selected;

ii) sintering the mixed raw materials to grow particles, wherein a maximum temperature is in the range of 800-1500 °C; and

iii) heating the sintered raw materials under an oxygen-containing atmosphere to condition properties of the particles, wherein a maximum temperature in the range of 300-1000 °C~~;~~, wherein the oxygen concentration in the atmosphere in step (iii) is higher than that in step (ii).

9. (Cancelled)

10. (Previously presented) A process for producing a Mg-based ferrite carrier as claimed in claim 8,

wherein the atmosphere in step iii) is an inert gas atmosphere having an oxygen concentration of 0.05-25.0 vol.% on the basis of the total amount of the gases contained in the atmosphere.

11. (Previously presented) A process for producing a Mg-based ferrite carrier as claimed in any one of claims 8-10,

wherein the atmosphere in step ii) is an inert gas atmosphere having an oxygen concentration of 0.001-10.0 vol.% on the basis of the total amount of the gases contained in the atmosphere.

12. (Previously presented) A process for producing a Mg-based ferrite carrier as claimed in claim 8,

wherein step i) of mixing raw materials comprises steps of:

preparing a slurry containing a Mg-containing compound and a Fe-containing compound; and

drying the slurry for granulation.

13. (Previously presented) A process for producing a Mg-based ferrite carrier according to claim 12,

wherein the slurry comprising a Mg-containing compound and a Fe-containing compound further comprises a Ca-containing compound.

14. (Original) A process for producing a Mg-based ferrite carrier according to claim 12 or 13,

wherein the slurry comprising a Mg-containing compound and a Fe-containing compound further comprises a binder,

wherein the content of the binder is in the range of 0.1-5 % by weight, based on the total amount of the raw materials in the slurry.

15. (Previously presented) A Mg-based ferrite material as claimed in claim 2,

wherein said Mg-based ferrite material has an average particle diameter in the range of 0.01-150 μm.

16. (Previously presented) An electrophotographic development carrier, which comprises a Mg-based ferrite material according to claim 15.

17. (Previously presented) An electrophotographic development carrier, which comprises a Mg-based ferrite material according to claim 16,

wherein said Mg-based ferrite material is coated with resin.

18. (Previously presented) An electrophotographic developer, which comprises an electrophotographic development carrier according to claim 17, and a toner.

19. (Previously presented) A process for producing a Mg-based ferrite carrier as claimed in claim 9,

wherein the atmosphere in step iii) is an inert gas atmosphere having an oxygen concentration of 0.05-25.0 vol.% on the basis of the total amount of the gases contained in the atmosphere.

20. (Previously presented) A process for producing a Mg-based ferrite carrier as claimed in claim 19,

wherein the atmosphere in step(ii) is an inert gas atmosphere having an oxygen concentration of 0.001-10.0 vol.% on the basis of the total amount of the gases contained in the atmosphere.

21. (New) A Mg-based ferrite material as claimed in claim 1, wherein "a" is from 0 to 0.21, "b" is from 0.10 to 0.70, "c" is from 0.60 to 1.6, and "d" is from 1.6 to 2.8.

22. (New) An Mg-based ferrite material obtained by a process comprising:

i) mixing raw materials appropriately selected from MgO, $MgCO_3$, $Mg(OH)_2$ and $MgCl_2$ as Mg raw materials; FeO, Fe_2O_3, Fe_3O_4 and $Fe(OH)_x$ as Fe raw materials (x representing a number in the range from 2 to 3); and CaO, $CaCO_3$, $Ca(OH)_2$ and $CaCl_2$ as Ca raw materials, provided that at least one Mg-containing compound and at least one Fe-containing compound are selected;

ii) sintering the mixed raw materials to grow particles, wherein a maximum temperature is in the range of 800-1500 °C; and

iii) heating the sintered raw materials under an oxygen-containing atmosphere to condition properties of the particles, wherein a maximum temperature in the range of 300-1000°C.